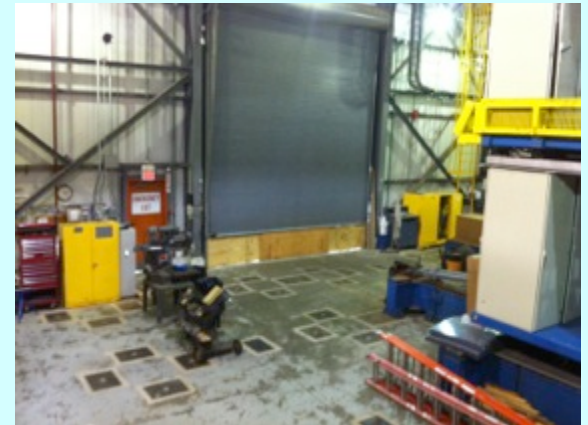


PHENIX WEEKLY PLANNING



6/27/2013
Don Lynch

This Week

- move EC to AH - Done
- Move MuID collars to AH - Done
- Move plates and 20 ton cart to IR - Done
- Move manlift to IR - Done
- Move VTX East to PHYSICS Lab
- Move VTX West To CHEMISTRY Lab
- CPR training for techs who need it
- Continue building VTX strip-pixel staves
- Continue sPHENIX support
 - HCal prototype
 - EMCal prototype design continuing
- MPC-Ex design for run 14
- Future IR evolution modeling



6/27/2013

Next Week

- Begin VTX Repairs/Upgrade
- Continue building VTX strip-pixel staves
- Continue sPHENIX support
 - HCal prototype
 - EMCal prototype design continuing
- MPC-Ex design for run 14
- Future IR evolution modeling
- 4th of July Holidays, Many on vacation, limited work schedule
- No Planning Meeting next week due to Holiday

Major Projects This Summer:

- VTX repairs/upgrades/general maintenance (Mike L.) **Work permit approved**
- DC East Window Replacement (Kenny J.) **Work permit needed**
- MPC-Ex Initial (partial) Installation (Jim L.) **Work Permit needed**
- mRPC Tests in mRPC Test Lab (formerly RPC Factory) (Frank T.) **Procedures Done**
- sPHENIX Prototypes assembly & tests (All) **(need space allocation and work permit(s))**
- MuTr troubleshooting and Repairs (Chris P.) **work permits approved**
- Window Washer Winch upgrade (Jim L.) **need new work permit**

Other Mechanical (TBD)

Other Electrical Projects

- HVAC Controls Upgrade (Frank T.)
- Complete Window Washer Controls Upgrade (Frank T.)

Other Electronics Projects

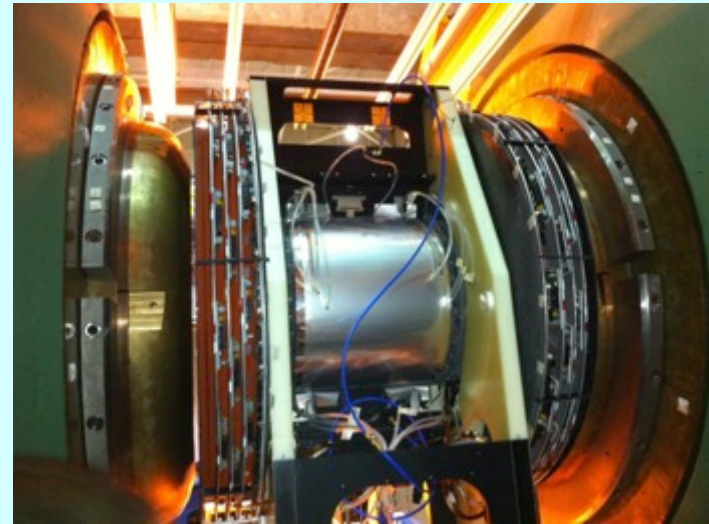
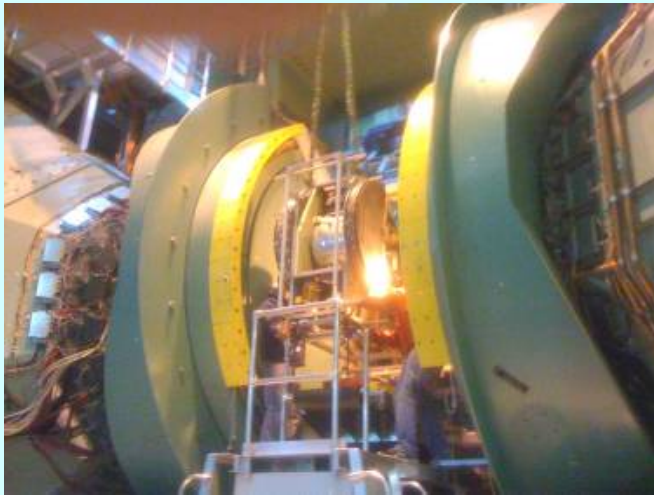
- Additional upgrading of ADAM system to MODBUS (Sal P.)
- Electronics research in support of sPHENIX and RATCAP (Sal P.)
- Lecroy HV communications upgrade (Sal P.)

Other Gas System Projects (TBD)

- RPC Gas Recirc. Upgrade (John T.)
- Drawing and Config. Control Improvements (SULI Student)

Other Infrastructure Projects (TBD)

VTX/FVTX repairs/upgrades



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VTX & FVTX Summary of Tasks

VTX/FVTX Disassembly - After Start of shutdown tasks are completed (EC out to AH), coolant and N₂ lines, LV, signal and HV cables and fibers will be carefully removed and coolant drained. East and west detector halves will then be de-mounted and transported to Chemistry bldg for maintenance and overhaul.

At Chemistry lab - VTX, bigwheels and FVTX will be disassembled and all 4 FVTX stations will be transported to the FVTX PHYSICS Lab.

At PHYSICS FVTX lab -FVTX stations will be tested, faults will be isolated, repaired and re-tested.

Concurrently at Chemistry lab -VTX will be disassembled into individual barrels and bigwheels, new /reworked pixel staves will be installed, improved strip-pixel staves will be fabricated assembled and integrated with active components harvested from staves to be replaced, tested and reinstalled in their respective barrels. The VTX will then be re-assembled tested and re-surveyed.

FVTX transported to Chemistry building. FVTX Integrated into VTX. VTX/FVTX assembly surveyed

VTX&FVTX assembly transported to PHENIX and installed on rails.

Coolant and N₂ lines, LV, signal and HV cables and fibers will be carefully reattached.

Full detector re-surveyed in IR



DC East Repairs/Upgrade

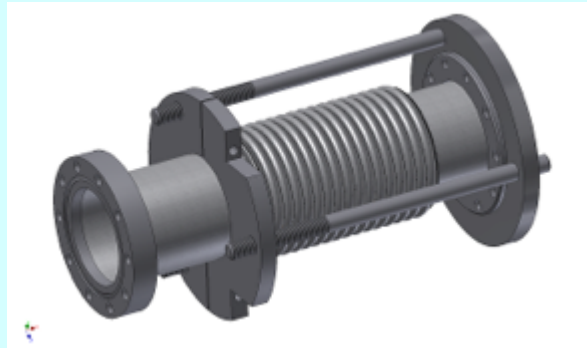
Similar to the work done on the DC West last year, the DC East will have its window replaced to repair the wear that years of wire repairs rendering the DC East window a patchwork of tape and have elevated leak rates to the point where replacement of the mylar window is needed.

More input from DC Experts:

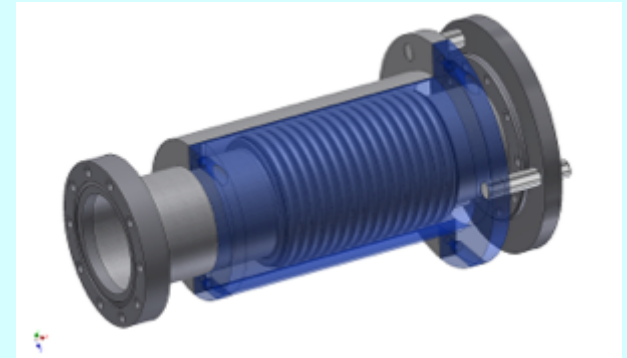
Need CO₂ + Ar (30%/70%) for electronics tests and P-5 (95% Ar / 5% CH₄) for window tests, and need HV, LV and DAQ operational. Electronics tests to begin 8/10, window replacement to begin 8/25. also want 2 manlifts?

- East Carriage move to AH
- Design & Construct tent (similar to tent constructed for DC West last year) to prevent foreign material from entering DC East cavity while window is removed.
- CAD to provide wide vertical lift to allow DC experts to remove and replace window
- Get supplies and materials from Stony Brook for window replacement
- Electronics troubleshooting and repair
- Remove and replace window
- Isolate and repair leak under electronics card
- Leak test
- Operational tests
- Remove tent and manlift

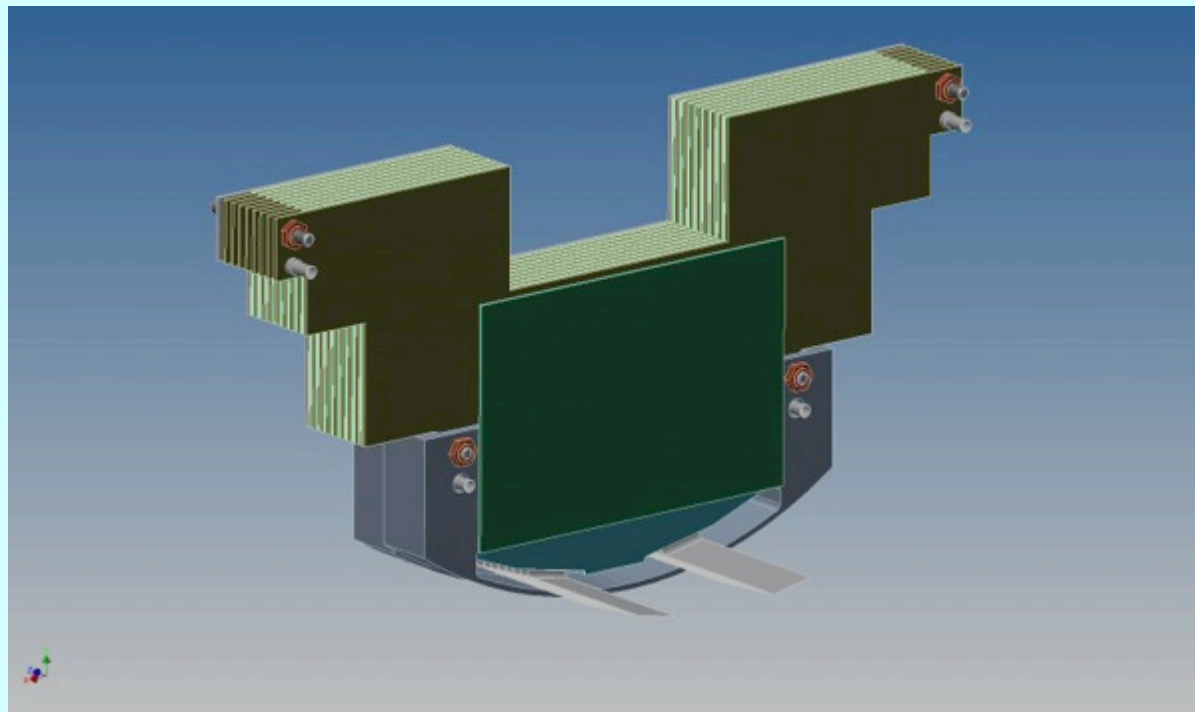
MPC-Ex Initial (Partial) Installation



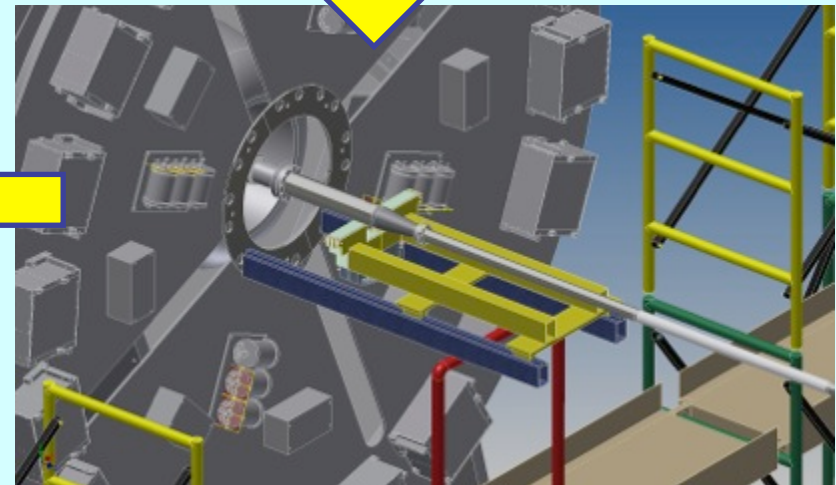
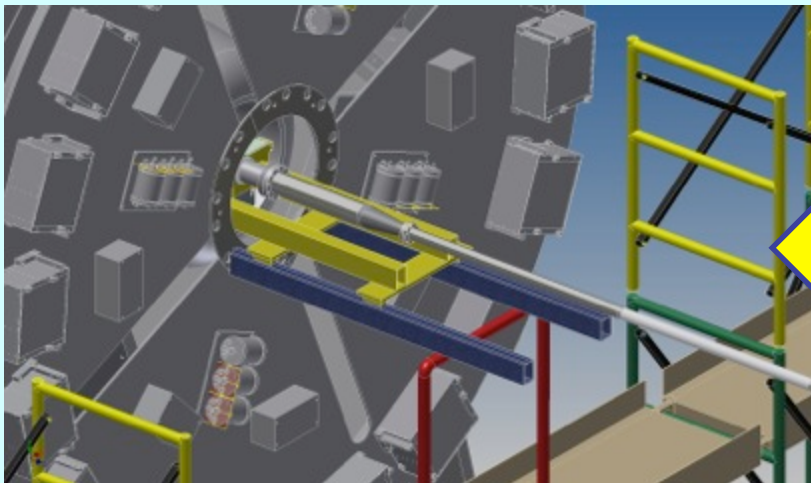
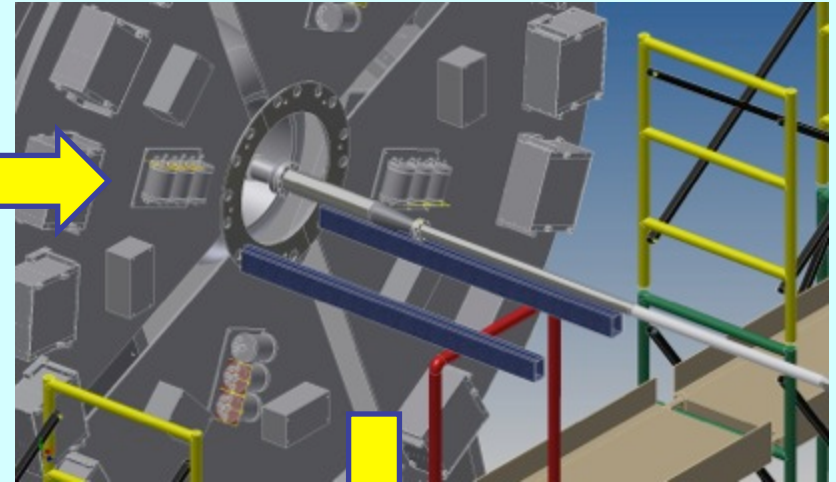
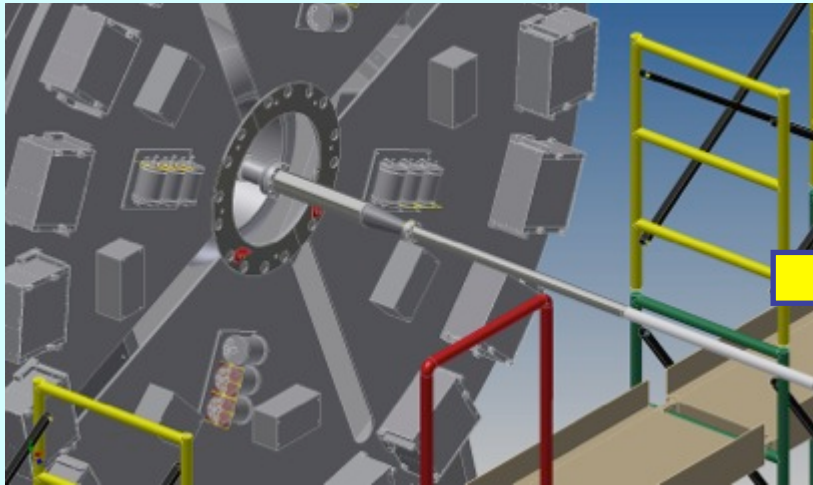
Existing vacuum bellows anti-squirm In MPC S Cavity



Design vacuum bellows anti-squirm in MPC S Cavity to accommodate MPC-Ex



PHENIX - 3D Model



MPC-Ex Initial/Partial Installation Summary of Tasks

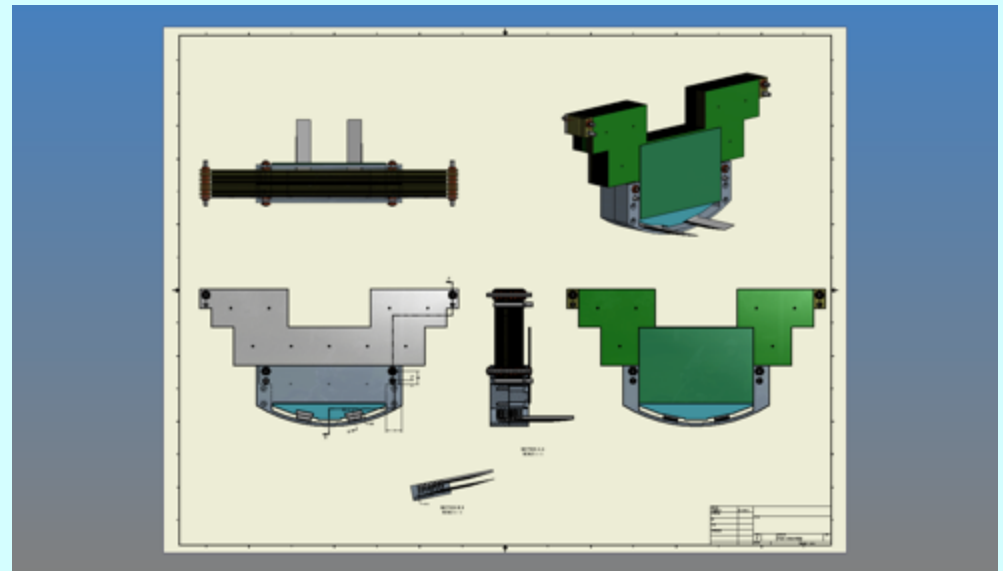
Determine extent of installation for 2013

Design assembly, support and installation fixtures

Assemble and bench test

Install

Performance tests



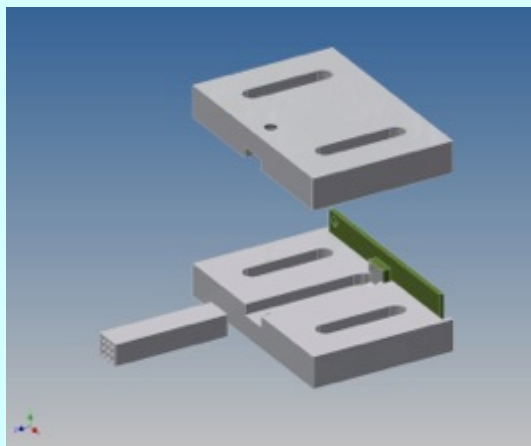
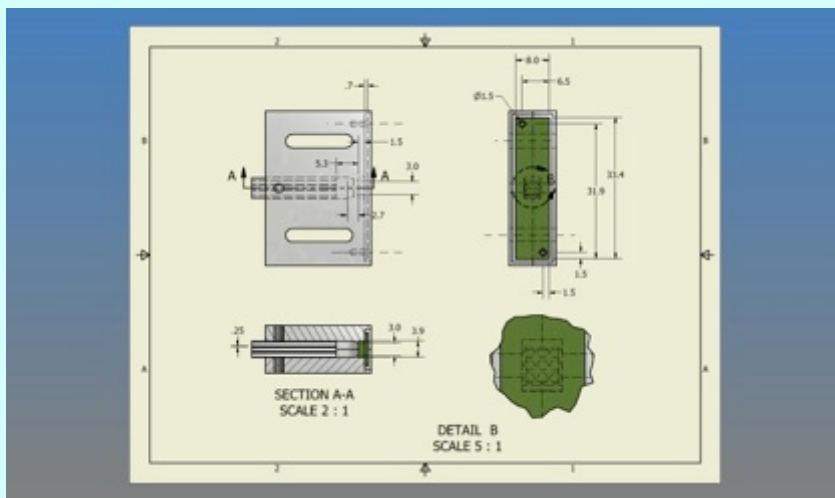
mRPC Test Lab Project



mRPC Test Lab Support
as required

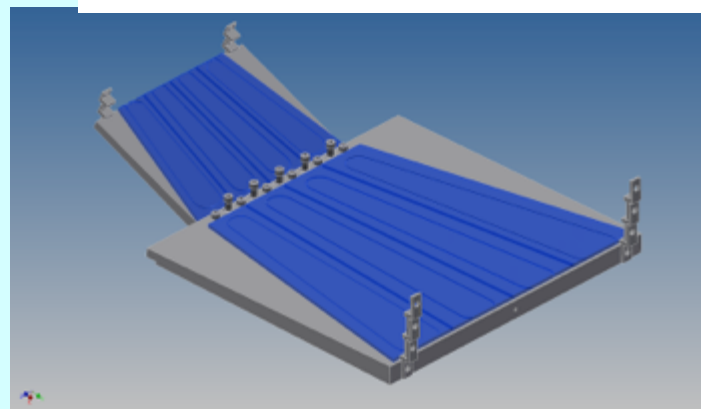
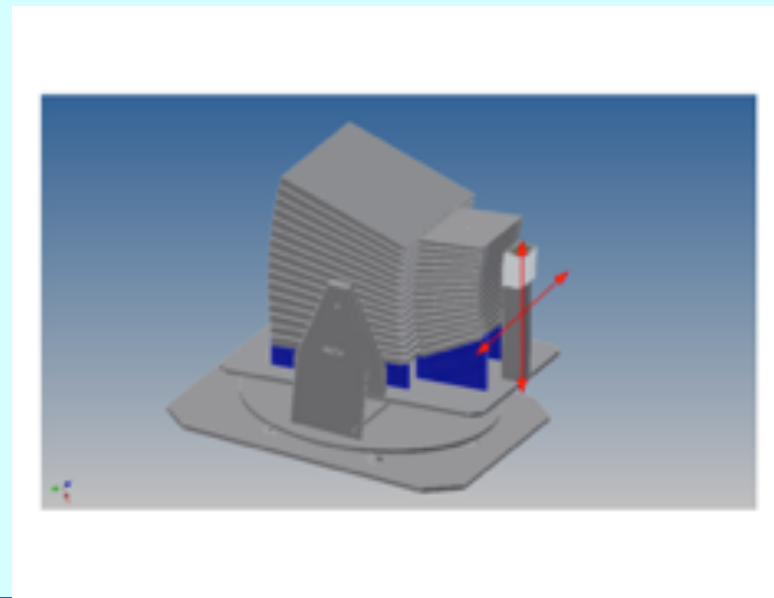


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Hcal prototype component procurement is underway:

Steel and scintillator procurements in progress



6/27/2013

sPHENIX Prototype Assembly and Test Tasks

Design Hcal and EMCal Prototypes and support components and shipping crates

Procure materials and detail parts

Receive and inspect parts

Assemble prototypes

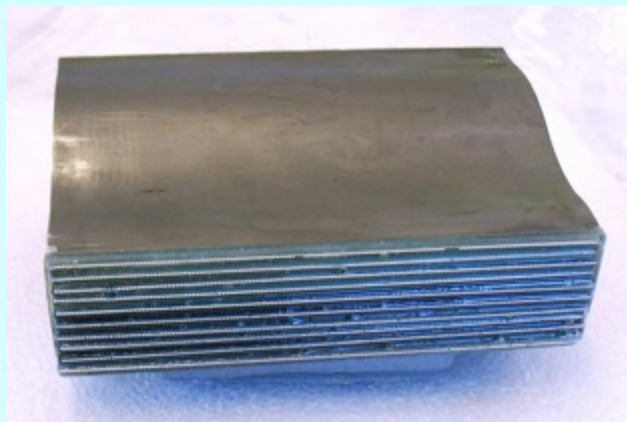
Test assemblies for mechanical fit and function

Package and ship prototypes to FERMI Lab for performance tests

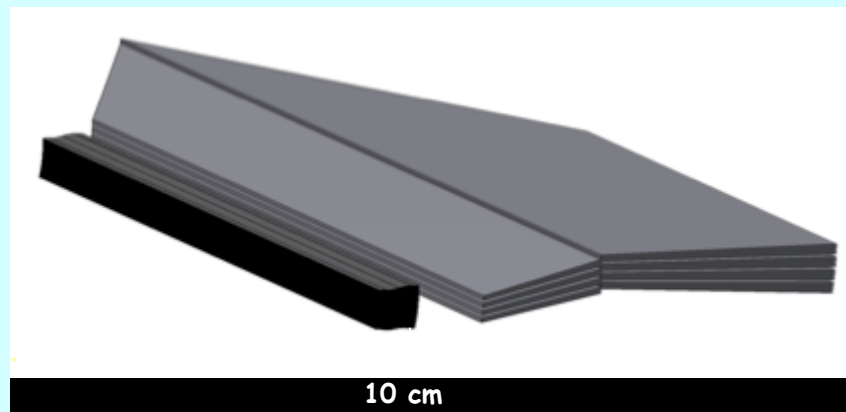
Test and Evaluate at Fermi Lab

EMCal Prototype

Prototype accordion plates with fibers produced as part of SBIR. EMCal for test beam will be flat tapered plates



Prototype "Egg Carton" light collection

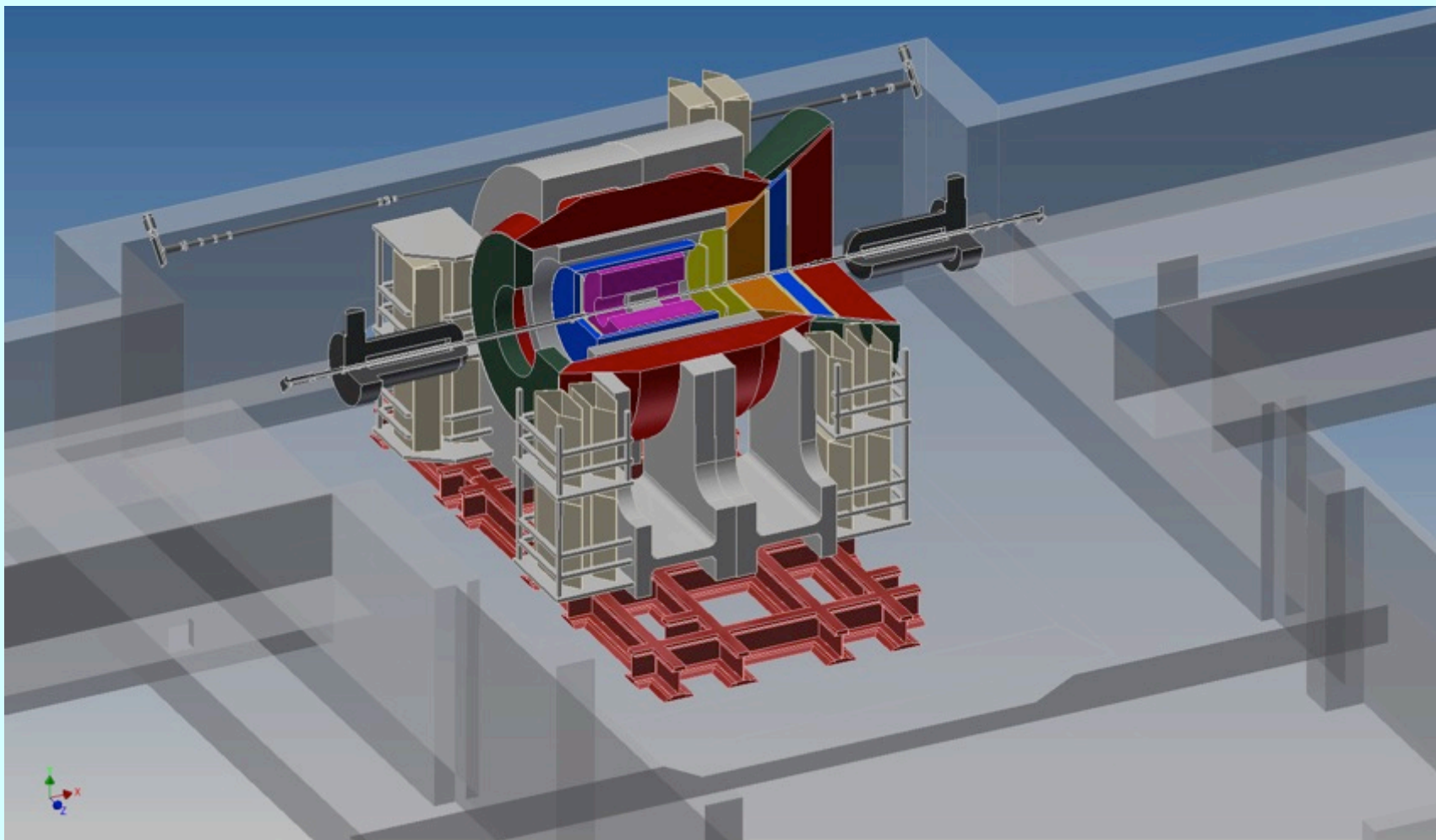


Proto-type EMCal in front of proto-type HCal

(Photos from Eric slides, from Craig and Sean slides)

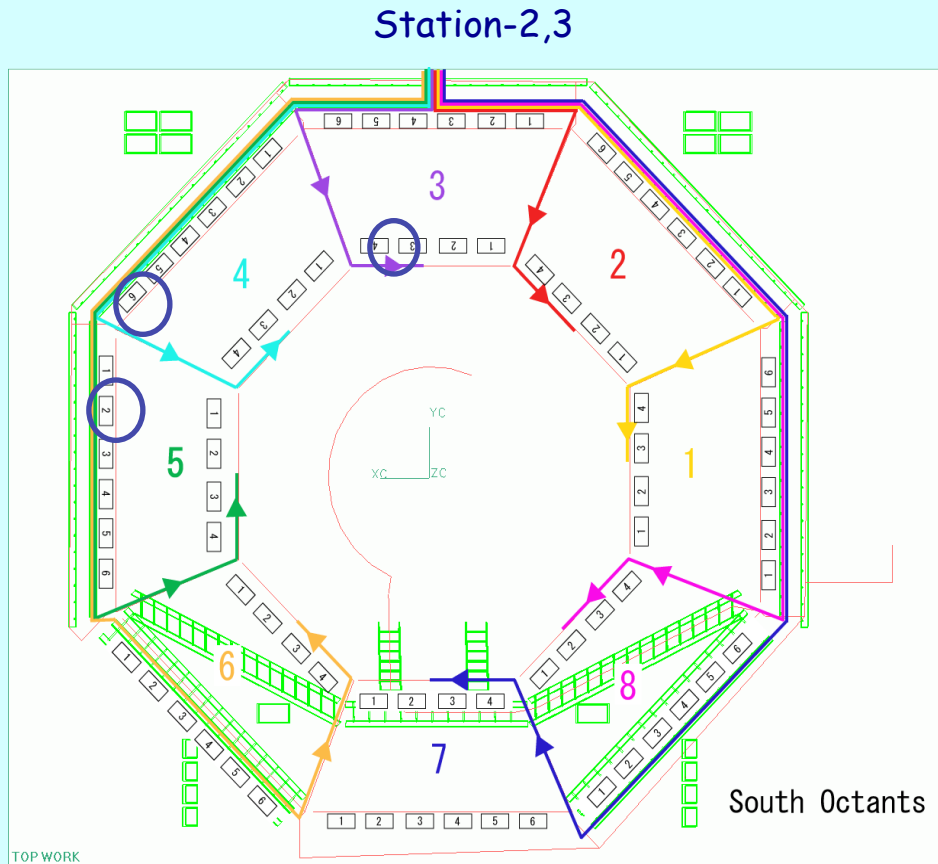
ePHENIX Model Update

TECHNICAL SUPPORT WORK

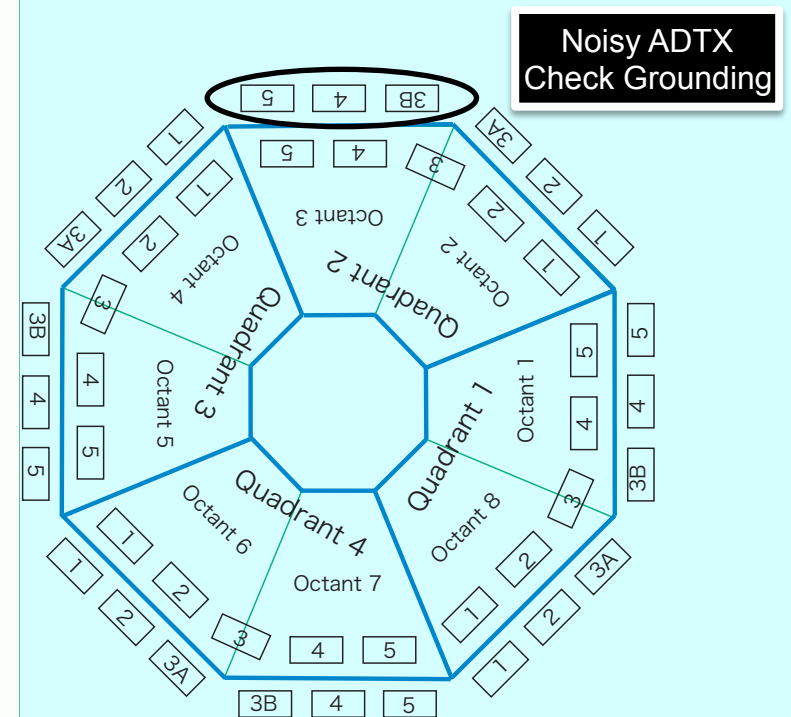


MuTr South Arm Areas to be accessed

PHENIX SOUTH ARM

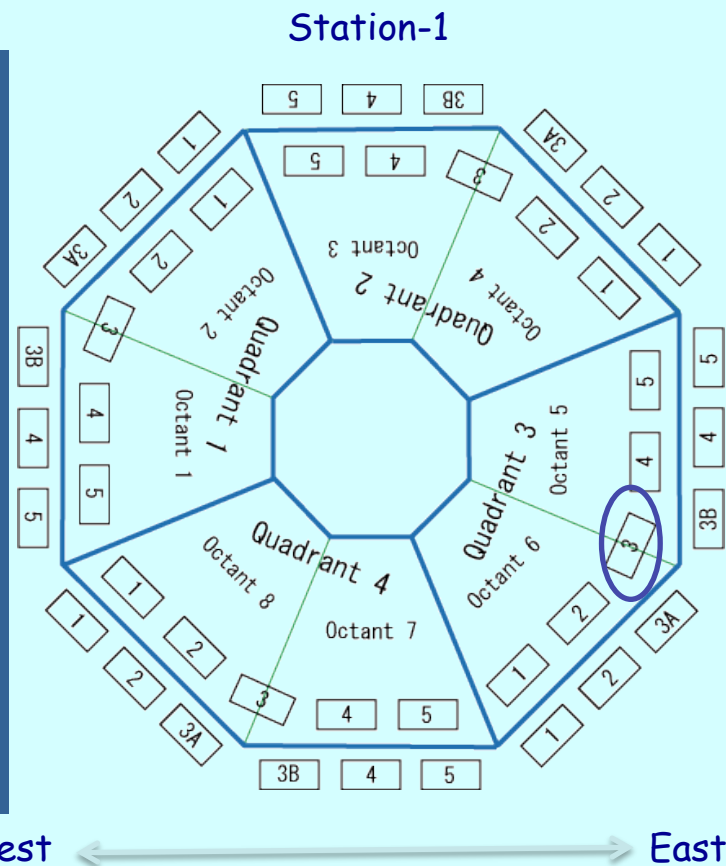
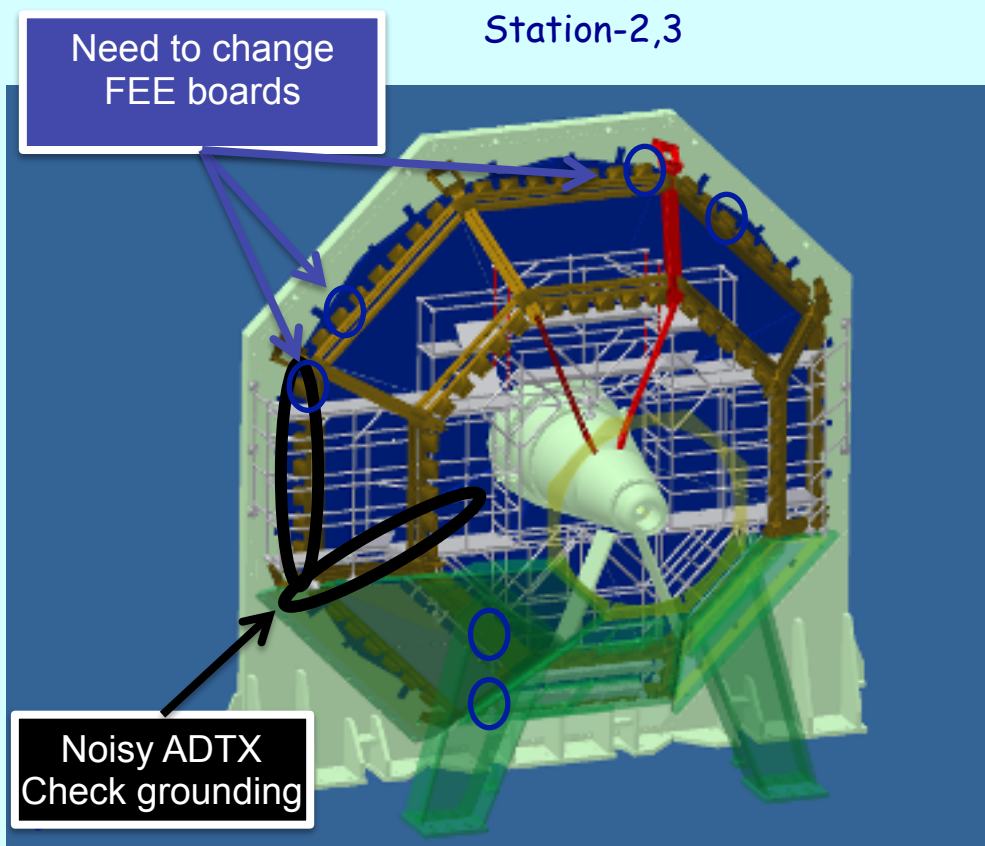


South Station-1 Chassis

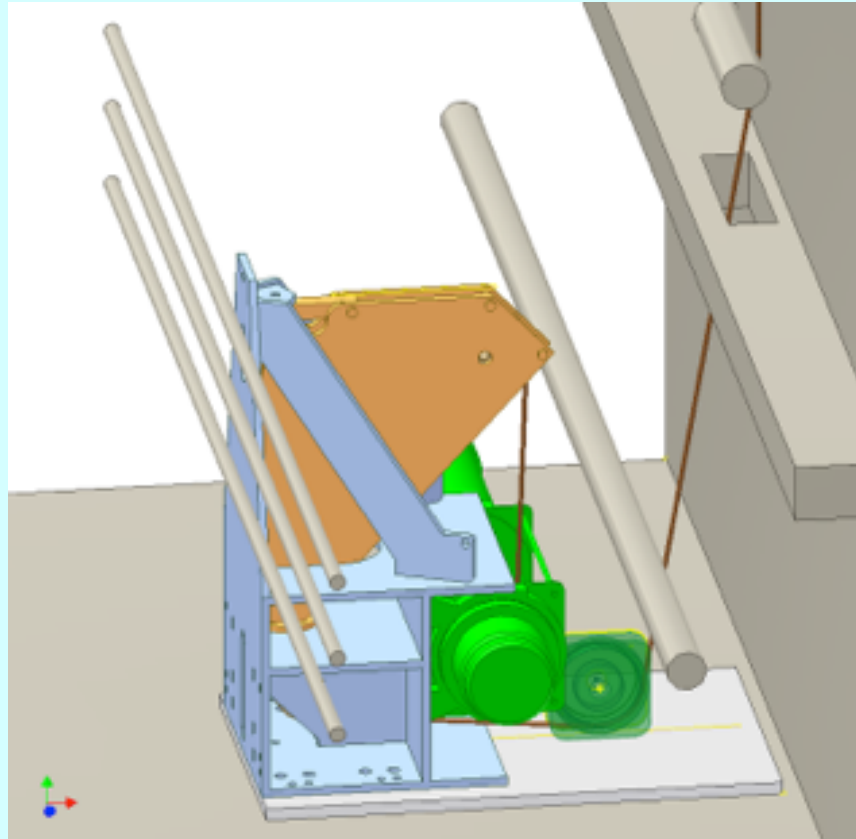


MuTr North Arm Areas to be accessed

PHENIX NORTH



Window Washer Winch Upgrade



Winch is on Order

6/27/2013

Window Washer Winch Upgrade Summary of Tasks

Specify and Order Winch & Sheave

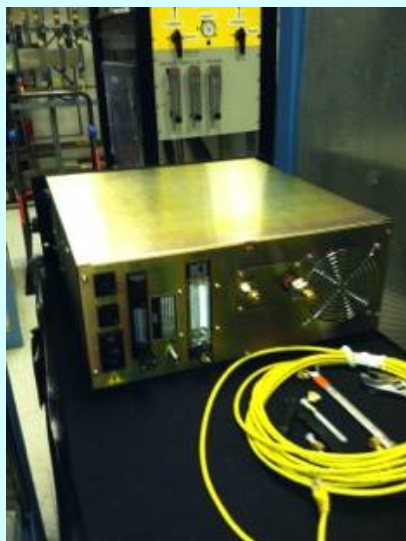
Receive and Inspect winch and components

Design and Fabricate Winch & Sheave Base

Install and test Winch, integrate with window washer hardware, controls and power

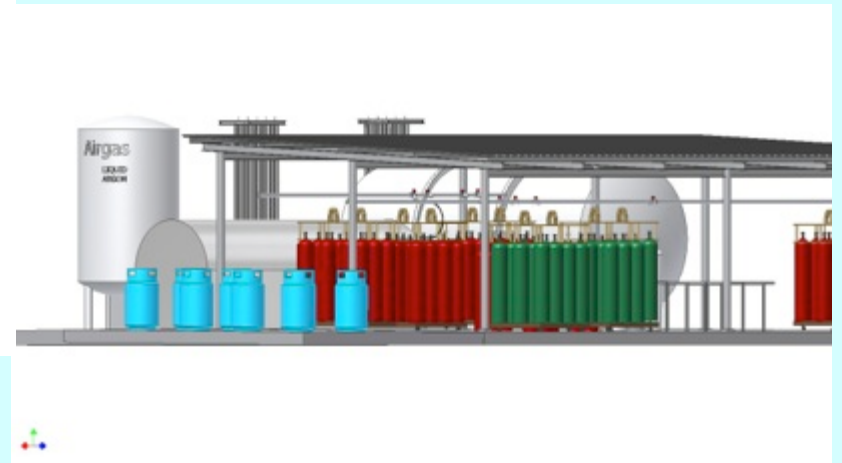
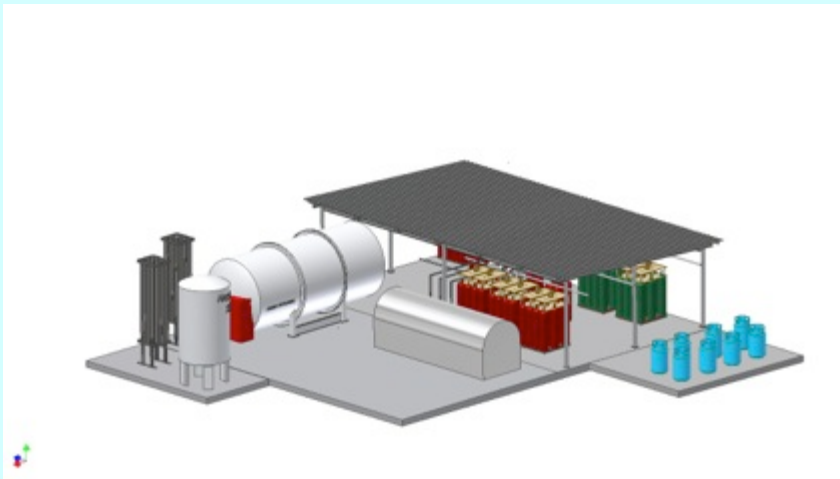
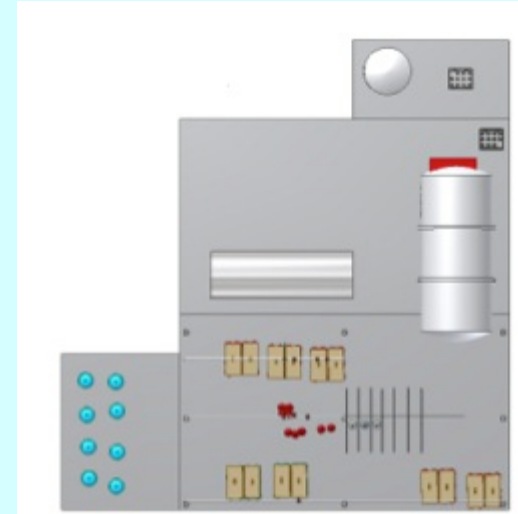
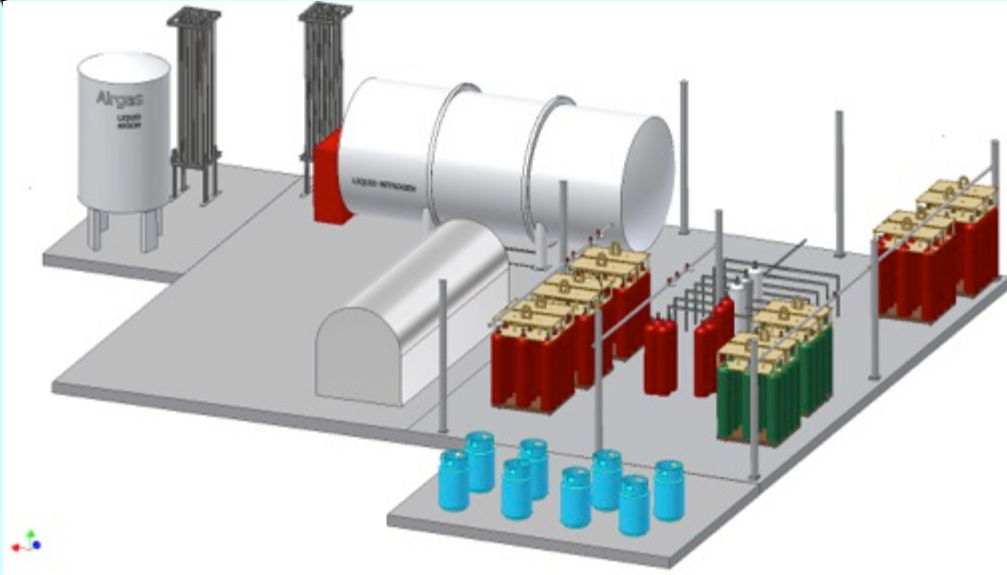
Final Inspection and approval of window washer upgrade

(Note: remote safety pin insertion and retraction was installed and has been in operation since the start of run 13.)



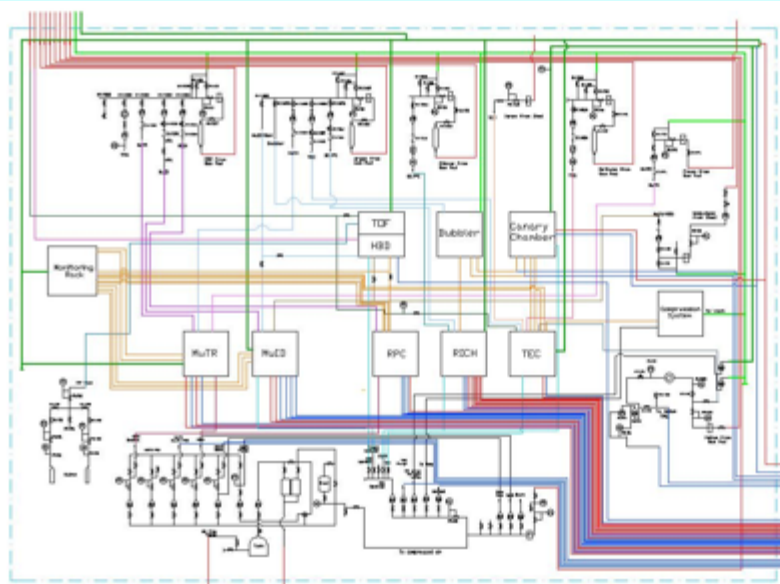
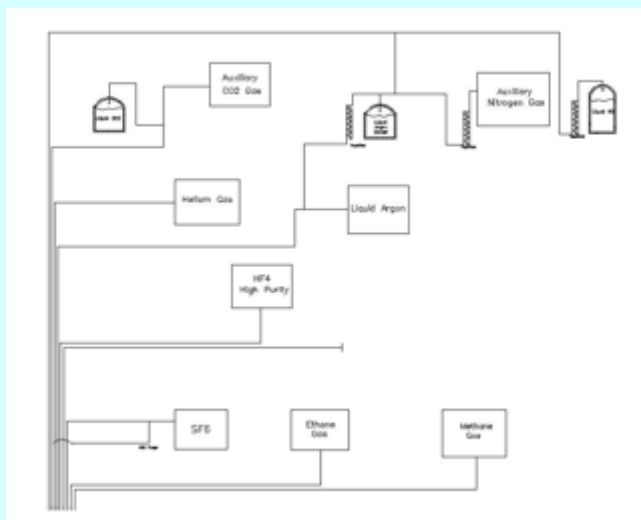
New Gas Analyzer Project (RPC recirculation and more)

6/27/2013



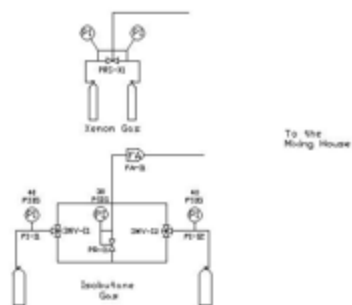
Gas System CM and Model Updates

Gas System Schematic Updates

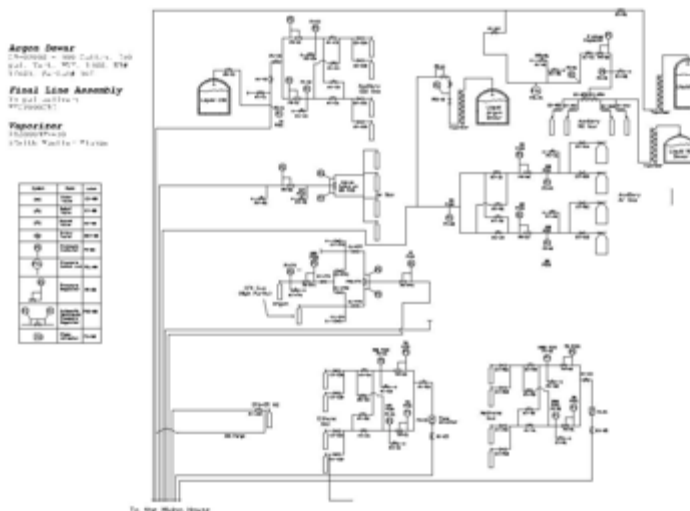


Symbol	Name	Label
[Symbol]	Helium Gas	01-00
[Symbol]	Nitrogen Gas	02-00
[Symbol]	CO2 Gas	03-00
[Symbol]	HF4 High Purity	04-00
[Symbol]	Ethane Gas	05-00
[Symbol]	Methane Gas	06-00
[Symbol]	SFE	07-00
[Symbol]	Helium Gas	08-00
[Symbol]	Nitrogen Gas	09-00
[Symbol]	CO2 Gas	10-00
[Symbol]	HF4 High Purity	11-00
[Symbol]	Ethane Gas	12-00
[Symbol]	Methane Gas	13-00
[Symbol]	SFE	14-00

Line	Color
Helium Gas	Red
Nitrogen Gas	Green
CO2 Gas	Blue
HF4 High Purity	Orange
Ethane Gas	Purple
Methane Gas	Yellow
SFE	Light Blue
Helium Gas	Red
Nitrogen Gas	Green
CO2 Gas	Blue
HF4 High Purity	Orange
Ethane Gas	Purple
Methane Gas	Yellow
SFE	Light Blue



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[Symbol]	Ethane Gas	12-00
[Symbol]	Methane Gas	13-00
[Symbol]	SFE	14-00

6/27/2013

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RPC Factory Decommissioning



6/27/2013

Additional Shutdown Work

- ZDC Remove, Test, Recalibrate



- Event Builder Maintenance: removing and cleaning EB modules
- RPC Factory Decommissioning

6/27/2013

Prep for 2013 shutdown	Done
Design, Fabricate MPC-Ex	
Define tasks and goals	
Analysis and design of fixtures, tools and procedures	
Fabricate/procure tools and fixtures	
Tests, mockups, prototypes	
Receive, fabricate, modify, finish installables	
Review and approval of parts, tools, fixtures and procedures	
Assembly and QA tests	
VTX Strippixel redesign	Done
VTX Strippixel 1 st article stave assembly	Done
VTX Strippixel 1 st article qualification/performance tests	Done
VTX strippixel stave production	5/20-9/20/2013
VTX Strippixel sensor reclamation	4/1-8/20/2013
VTX Strippixel ladder assembly & Test	7/15-9/27/2013
Pixel Ladder repairs	4/1-9/20/2013
Run 12 Ends	Done
Shutdown Standard Tasks	Done
• Open wall, disassemble wall, Remove MuID Collars	
• Move EC to AH, etc.	
VTX/FVTX Post run tests	Done
Disassemble VTX/FVTX services	Done
July 4 th Holiday	7/4-7/2013
Remove VTX/FVTX and transport to Chemistry Lab	7/8/2013
Remove Lampshade MMS, East Vertical	7/8-12/2013
Assemble, Test and Install MPC-Ex (Partial, location TBD)	7/22-10/1/2013

TECHNICAL SUPPORT WORKS

MuTR Troubleshooting, maintenance and repairs	7/22-9/27/2013
Summer Sunday (8/11) Prep and teardown	7/29-8/6/2013
Summer Sunday (RHIC)	8/4/2013
DC East Window Upgrade and Related Repairs	8/19-9/27/2013
sPHENIX HCal Prototype Assembly/test	8/19-10/15/2013
Labor Day Holiday	9/2/2013
Re-assemble VTX/FVTX halves	8/19-10/14/2013
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	10/14-10/21/2013
Install & Survey VTX/FVTX in 1008 IR	10/21-11/18/2013
VTX Commissioning	11/18-12/9/2013
Other detector maintenance as required	As required
Infrastructure maintenance as required	As required
TBD prototype tasks	As required
Pre-run commissioning and prep for run 14	11/1-12/31/2012
Veterans Day, Lab Holiday	11/11/2013
Prep for EC roll in	11/1-11/9/2013
Roll in EC	11/10-11/12/2013
Prep IR for run	11/1-11/30/2013
Thanksgiving Holidays	11/28-29/2013
Pink/Blue/White sheets	12/14-12/31/2013
Christmas Holiday	12/24-25/2013
New Year's Day Holiday	1/1/2014
Start run 14	1/2/2014

Safety and Security

CPR Course Cancelled for most of us: need to reschedule

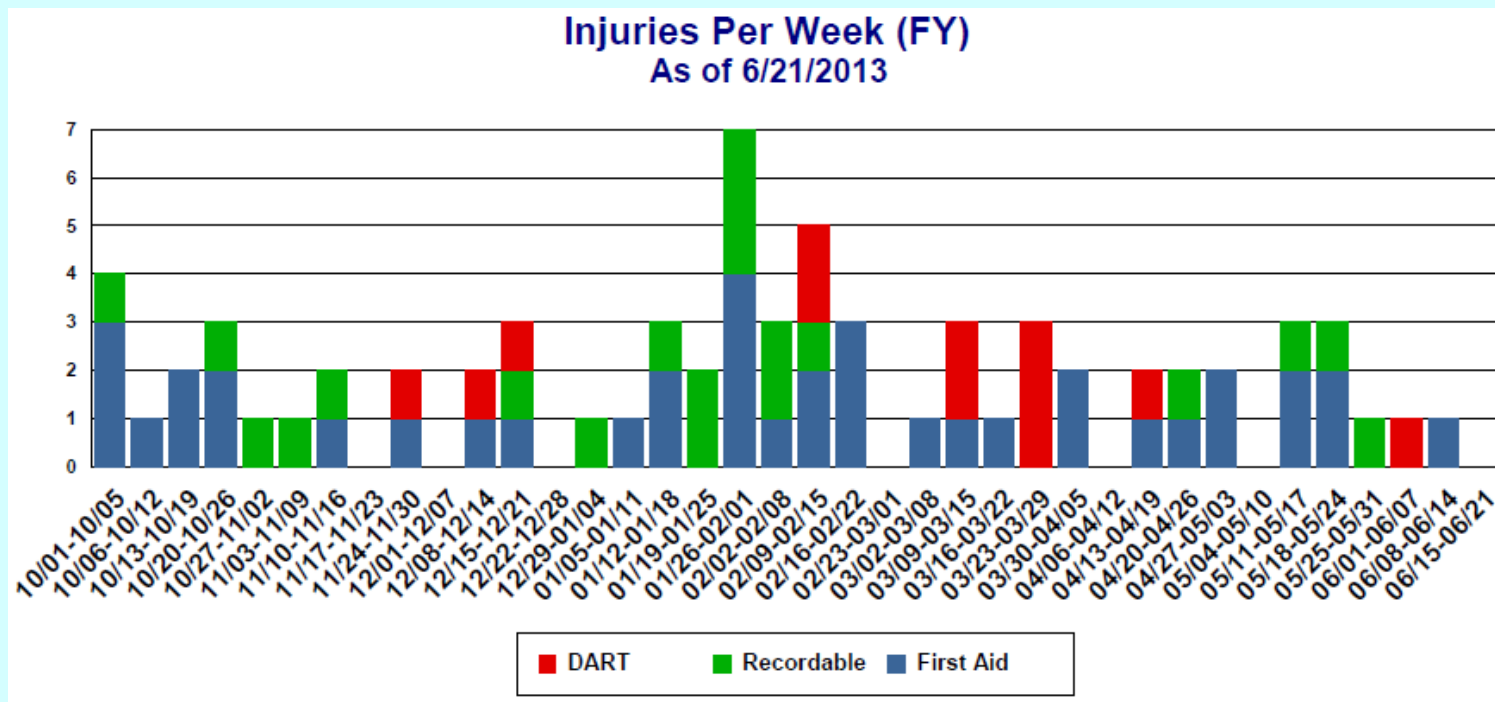
From Mike Zarcone:

As we start to prepare for a holiday weekend this next month (July 4-5, 2013), the Laboratory Protection Division (LP) would like to remind you about your important role in protecting BNL assets. Please remember to lock offices and buildings and please remind others to do the same.

From Ray Karol:

New CAD OPM's on LOTO posted: (CAD OPM's 2.36, 2.36a, 2.36b, 2.36c and 2.36d. These are updated to reflect updated BNL policy. There will be required 1-hr training seminars for Authorized LOTO Employees. Affected employees will be welcome to attend as well. These will be held end of July to end of August. Schedule will be published in mid-July. Important to make sure we do LOTO safely and correctly.





Injury Status:

FY13 YTD: DART – 12, TRC – 32, First Aid – 39

FY12: DART – 17, TRC – 35, First Aid – 70

FY11: DART – 30, TRC – 44, First Aid – 45

FY13 Injury Listing: <https://intranet.bnl.gov/esh/shsd/seg/OccInj/BNLInjuries.aspx>

Recent Injuries

	None
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Recent Events

6/19/13	SC-BNL	During the incoming inspection and survey of a FedEx delivery of Biodex containers from GE Healthcare, Radcon technicians determined that four of the seven containers were externally contaminated at levels from 2000-5000 dpm/100cm ² . The Biodex containers (which were empty at the time) are used to contain and ship Sr-82 pharmaceutical products and were shipped to BNL from GE. While the containers were compliant with Department of Transportation regulations (which allow up to 22,000 dpm/100cm ² for empty packages in transit), they did not meet DOE requirements which require levels to be less than 1000 dpm/100cm ² . Technicians bagged the containers and performed surveys which determined there was no spread of contamination. Investigation and corrective action planning are underway. (Event Link)
6/18/13	Non-Reportable	During the course of a routine Tier 1 Inspection of the Site Resources Division's Transfer Facility, a petroleum leak was discovered coming from the front compartment of an old Clamshell Crane parked on grassy soil. While notification of both NYSDEC and SCDHS were made by EPD-Regulatory Compliance; it is deemed a routine reporting. The amount of petroleum released is not precisely known, but the stain appears to be a circle about 3 feet in diameter [estimated as < 100 gallons]. UPDATE: 06/20/2013 - BNL Spill Report #13-21, a spill on June 18th of about 5 gallons of power steering fluid from a Clamshell Crane and Backhoe at the Transfer Facility. (Event Link)

Where To Find PHENIX Engineering Info



4th of July Holidays Next Week :

- Limited Technical Support Available, Mon- Wed
- no Planning Meeting Thur
- Lab closed Thur & Fri



http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

6/27/2013

